

Section-A

Multiple Choice Questions (MCQ's)

Q-01: Choose the correct answer for each from the given option.

- (i) If $x^3 + 4x^2 - 7x + 3$ is divided by $x - 1$, then remainder is _____.
(a) 0 (b) -1 (c) 1 (d) 2
- (ii) In 35, 30, 10, 48, 100, 90, the range (R) is _____.
(a) 35 (b) 10 (c) 100 (d) 90
- (iii) The central angle of a minor arc is _____ than the inscribed angle of its corresponding major arc.
(a) Less (b) Double (c) Half (d) None
- (iv) If Set A contains 7 elements and set B contains 3 elements, then $A \times B$ contains _____ order pairs.
(a) 12 (b) 21 (c) 3 (d) 7
- (v) $x^4 - 0.4x^2 + 0.04 =$ _____.
(a) $(x^2 - 0.2)^2$ (b) $(x - 0.2)^2$
(c) $(x^2 + 0.2)^2$ (d) $(x^2 + 0.2)(x^2 - 0.2)$
- (vi) $\sqrt{1 - \sin^2(m\angle A)} =$ _____.
(a) $1 - \sin(m\angle A)$ (b) $\sqrt{1 - \sin(m\angle A)}$
(c) $\cos(m\angle A)$ (d) $\operatorname{cosec}(m\angle A)$
- (vii) In $\begin{vmatrix} a & b \\ c & d \end{vmatrix}$ the element of 1st row and 2nd column is _____.
(a) a (b) b (c) c (d) d
- (viii) $\sqrt[4]{81} =$ _____.
(a) 2 (b) 3 (c) 9 (d) 4
- (ix) The roots of the equation $ax^2 + bx - C = 0$, $a \neq 0$ are _____.
(a) $\frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$ (b) $\frac{b \pm \sqrt{b^2 - 4ac}}{2a}$
(c) $\frac{-b \pm \sqrt{b^2 + 4ac}}{2a}$ (d) $\frac{b \pm \sqrt{b^2 + 4ac}}{2a}$
- (x) $2^5 = 32$ in logarithmic form is _____.
(a) $\log_2 5 = 32$ (b) $\log_5 2 = 32$ (c) $\log_2 32 = 5$ (d) $\log_5 32 = 5$
- (xi) The mantissa of the logarithm is _____.
(a) positive (b) Negative (c) Both a & B (d) None
- (xii) If non-common arms of two adjacent angles are collinear, they are _____.
(a) Complementary Angles (b) Supplemenetary Angles
(c) Vertical Angles (d) Altermate Angles
- (xiii) The ratio $a^{1/2} : b^{1/2}$ is called the sub-duplicate ratio of _____.
(a) $a:b$ (b) $a^3:b^3$ (c) $a^2:b^2$ (d) $a^{1/4}:b^{1/4}$
- (xiv) Every plane contains at least _____ non collinear points.
(a) 2 (b) 3 (c) 4 (d) None
- (xv) The degree of the polynomial $x^4y + y^2 + y^3$ is _____.
(a) 2 (b) 3 (c) 4 (d) 5
- (xvi) If $\begin{vmatrix} 5 & 6 \\ 3 & -1 \end{vmatrix}$ then $A^{-1} =$ _____.
(a) $\begin{vmatrix} 6 & -1 \\ 5 & 3 \end{vmatrix}$ (b) $\begin{vmatrix} 3 & -1 \\ 5 & 6 \end{vmatrix}$ (c) $\begin{vmatrix} 5 & 3 \\ 6 & -1 \end{vmatrix}$ (d) $\begin{vmatrix} -1 & 6 \\ 3 & 5 \end{vmatrix}$
- (xvii) If $a:b = c:d$, then $b:a = d:c$ this properties of proportion is called _____.
(a) Altermando (b) Componendo (c) Dividendo (d) Invertendo
- (xviii) A series contains values 14, 14, 14, 14, 14, 14, 14, 14, its standard deviation is _____.
(a) 4 (b) 1 (c) 0 (d) -2.10
- (xix) A perpendicular from the vertex to the opposite side of a triangle is _____.
(a) Altitude (b) Hypotenuse (c) Median (d) None
- (xx) The value of $\sec 30^\circ$ is _____.
(a) $\frac{2}{\sqrt{3}}$ (b) $\sqrt{2}$ (c) 2 (d) $\frac{1}{2}$